

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/618,877	LARSEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Chukwuma O. Nwaonicha	1621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☐ The allowed claim(s) is/are 1-7.
3. ☐ The drawings filed on \_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

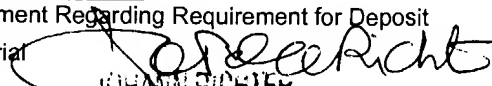
\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>11/10/03</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                               | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other ____.   |

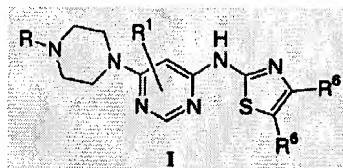
  
 JOHANN RICHTER  
 SUPERVISORY PATENT EXAMINER  
 GROUP 16

### DETAILED ACTION

Claims 1-7 are pending in the application.

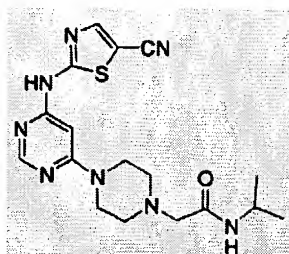
#### ***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance: Claims 1-7 are allowable over the prior art of record. The two-step synthetic route of generating a substituted thiazolyl-amino pyrimidinyl piperazines of formula I:



wherein R is H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>0</sub>-C<sub>6</sub>)alkyl-NR<sup>a</sup>R<sup>b</sup>, or (C<sub>0</sub>-C<sub>6</sub>)alkyl-C(O)N(R<sup>e</sup>)<sub>2</sub>; R<sup>1</sup> is H, or unsubstituted or substituted (C<sub>1</sub>-C<sub>6</sub>)alkyl; R<sup>6</sup> is independently selected from H, phenyl, halogen, CN, pyridyl and R<sup>a</sup>, R<sup>b</sup>, R<sup>e</sup> are as defined in the claims, was found to be patentably distinct over the prior art.

Prior art does not teach or suggest the presently claimed method for making substituted thiazolyl-amino pyrimidinyl piperazines in a two-step process by adding 2-amino-5-cyanothiazole, dichloropyrimidine, and K<sub>3</sub>PO<sub>4</sub> to DMF to provide an intermediate: 2-[(6-chloropyrimidin-4-yl)amino]-1,3-t hiazole-5-carbonitrile, and reacting the intermediate with N-Isopropyl-2-piperazin-1-ylacetamide in n-butanol in the presence of triethylamine to give the desired product shown below.



Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.  
Patent Examiner  
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A handwritten signature in black ink, appearing to read "Johann R. Richter", is written over a horizontal line. The signature is stylized with a large initial 'J' and a long horizontal stroke at the end.

Johann R. Richter, Ph.D., Esq.  
Supervisory Patent Examiner,  
Technology Center 1600